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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,443	01/23/2002	Hans-Henning Zutz	31624-177199	1950

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EXAMINER

KYLE, MICHAEL J

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,443

Applicant(s)

ZUTZ, HANS-HENNING

Examiner

Michael J Kyle

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/23/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: Line 9 of claim 1 reads "respective aid recesses". The examiner believes "aid" should be changed to --said--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al (U.S. Patent No. 4,421,327) in view of Zutz (U.S. Patent No. 5,762,343).
4. Morley et al discloses a slide ring seal assembly comprising a slide ring (58) having an axially extending annular leg (114), the leg having radially outer (82) and radially inner (surface opposite 82) circumferential surfaces, and an axial free end. In addition, Morely et al discloses an annular sealing body (62) surrounding the leg (114) and being seated thereon, and a plurality of circumferentially spaced, radially inward oriented extensions (area between grooves 86) forming part of the annular sealing body. The inward oriented projections extend into recesses formed between lugs (76) on the radially outer surface.

Art Unit: 3676

5. Morley et al does not disclose circumferentially spaced recesses provided in the leg at the free axial end thereof, each recess extending from the radially outer surface to the radially inner surface, or that the inward-oriented extensions of the annular sealing body project into respective recesses.

6. Zutz teaches circumferentially spaced recesses (7) provided in a leg of a slide ring assembly at a free end thereof, the recess extending from one surface to another, opposite surface, and extensions of an annular sealing body (4) projecting into the recesses to improve adherence (column 2, line 67 – column 3, line 3). Zutz further shows the recess to continue with an extending undercut provided in the leg (part of aperture 7, shown in the figure), and the at least one extension of the annular sealing body (4) continues with a projection received by the undercut. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the axial leg of Morley et al by including recesses as taught by Zutz in order to improve adherence of the seal body to the seal ring.

7. With respect to claim 3, Morley et al discloses the leg to have, at the axial free end, on the radially outer surface, a circumferentially extending enlargement (76).

8. With respect to claim 4, Morley et al discloses the seal ring to be generally L-shaped (column 2, line 37) and have a radially extending slide sealing surface (110, 112).

9. With respect to claim 5, Morley et discloses a pair of sealing rings (56, 58) having their respective slide sealing surfaces in contact (110, 112), and a respective sealing body (60, 62) for each of the sealing rings.

Art Unit: 3676

10. With respect to claim 6, Morley et al discloses the sealing ring to be formed of metal (column 4, line 3) and the sealing body to be formed of a resilient material ("elastomeric", column 4, lines 4 and 5).

11. With respect to claim 7, Morley et al discloses the sealing body to have a generally trapezoidal cross-section (see figures).

Response to Arguments

12. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection. These claims are now rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al (U.S. Patent No. 4,421,327) in view of Zutz (U.S. Patent No. 5,762,343). Zutz teaches a way of connecting a seal body to a seal ring a slide ring assembly that improves the adherence between the parts.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited to further show the state of the art with respect to slide ring assemblies: Utvitch, Blair, Ohtsuka, Zutz (U.S. Patent No. 5,642,890), and Bedford (U.S. Patent No. 6,086,069).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Kyle whose telephone number is 703-305-3614. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.

Art Unit: 3676

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703-308-3179. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

16. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.

mk
June 3, 2003



Anthony Knight
Supervisory Patent Examiner
Tech Center 3600